APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/929,399	08/14/2001	Nabil M. Lawandy	902.0017.U1(US)	9150

			EXAMINER
29683	7590	03/03/2004	ARANI, TAGHI T

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ART UNIT	PAPER NUMBER
2131	8

DATE MAILED: 03/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 April 2003*.

2a)☐ This action is **FINAL.**   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-30* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date *5,7*.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Claims 1-30 were pending for examination.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act

of 1999 (AIPA) and the Intellectual Property and High Technology Technical

Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting

directly or indirectly from an international application filed before November 29, 2000.

Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior

to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claim 1-6 are rejected under 35 U.S.C. 102(e) as being anticipated by Rhoads by

US Appl. No. 2001/0023193 published Sep. 2001.

As per claim 1, Rhoads is directed to wireless telephony device (i.e. hand held

system) equipped with an optical image sensor, and a lens for imaging an object onto the

sensor, see abstract. The optical sensor of Rhoads permits decoding of bar codes,

watermarks, etc. (i.e. digitally watermarked data), from objects imaged by the sensor.

Rhoads' wireless telephony system includes an optical sensing system of the type

known from Microsoft IntelliMouse comprising a 1D array of plural optical sensors (e.g.

CCD, CMOS), or a 2D array wherein the device includes multi-element CMOS optical

sensor integrated on an IC with various detector and processing circuitry, operating in

conjunction with a short focal length imaging lens and an LED illumination source, see

page 1, paragraph 0007-0008.

Rhoads teaches that the optical data collected by the sensor is processed within

the processor to extract the steganographically encoded binary "Bedoop" (i.e. digitally

watermarked data) data therefrom, see page 1, paragraph 0010.

Rhoads 's hand held system detects the watermark (i.e. "Bedoop")data and relays

it to an associated computer (i.e. coupling the extracted information through a

communication link to an external data processor).

As per claims 2- 3, Rhoads' scanner can be wired to an associated host system,

wireless links (e.g., radio, infrared, ultrasonic etc.), see page 1, paragraph 0014.

As per claims 4-5, Rhoads further teaches that the protocols by which the

Bedoop data is conveyed from the hand held scanner to the network can take various

forms including Internet, see page 2, paragraph 25 (i.e. through various data

communication including internet).

As per claim 6, in an embodiment of Rhoads' Bedoop sensor is integrated into a

cellular phone, see page 1, paragraph 0015 with ready links to remote server (i.e. through

Internet) systems, see page 2, paragraph 16-17. That is, a wireless link with an interface

to the Internet recited in the claim.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and

the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over of Rhoads as applied to claim 1 above, and further in view of Rhoads, Us Pat. Appl. No. 6,311,214, issued Oct. 2001.

Rhoads ('214) is directed to steganographically encoding printed object with plural-bit data, see abstract.

Rhoads teaches compensating distortion of the watermarked data, see page 16, lines 5-12.

It would have been obvious to one of ordinary skill in the art to modify Rhoads's scanning device disclosed in 2001/0023193 to account for distorted Bedoop mark encoded in objects such as "Business Card" to facilitate decoding in the presence of arbitrary rotation or scale distortion of the object introduced during scanning, see page 16, lines 5-12.

Claims 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over of Rhoads ('193) and Rhoads ('214) as applied to claim 8 above, and further in view of Rhoads, Us Pat. Appl. No. 2004/0022444, Published Feb. 2004 and Kaish et al, US Pat. No. 5, 974,150, issued Oct. 1999.

Rhoads ('444) is directed a method and apparatus for identifying an object by encoding physical attributes of an object where the encoded information is utilized as at least one element for composing a digital watermark for the object. In another embodiment the physical attributes of the object are utilized as a key for accessing information included in a digital watermark for the object, see abstract.

Rhoads' method of identifying an object, comprising the steps of: encoding an object by utilizing discernable physical attributes for encoding information regarding the object; and utilizing the encoded information as at least one element for composing a digital watermark for said object, wherein the physical attributes further comprise a set of taggants in association with said object and that the taggants is comprised of members having discernable physical attributes predetermined for encoding information regarding said object.

Rhoads further detecting said encoded information in the digital watermark; and authenticating said object by comparing said encoded information with said discernable physical attributes of said object, see page 72, claims 1-6.

It would have been obvious to one of ordinary skill in the art to modify Rhoads Bedoop data system (watermarking system) to include physical attributes of the object encoded in the Bedoop data to provide two levels of security that discourages removal from authentic objects and reassociation with counterfeit objects , see Kaish et al (IDS paper No. 5)., col. 9, lines 1-44.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act

of 1999 (AIPA) and the Intellectual Property and High Technology Technical

Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting

directly or indirectly from an international application filed before November 29, 2000.

Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior

to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 9-17, 19-29 are rejected under 35 U.S.C. 102(e) as being anticipated by

Rhoads, US Pat. No. 6,311,214, issued Oct. 2001.

As per claims 9, 10, 13, 19, Rhoads discloses a method an apparatus for

steganographically encoding a plural-bit data (i.e. digitally watermarking data) on or in a

printed object such as an item of postal mail, a book, printed advertising, a business card,

product packaging, etc. When such an object is presented to an object is presented to an

optical sensor (of a hand held system), the plural-bit data is decoded and used to

establish a link to an Internet address corresponding to that object, see abstract.

In an exemplary embodiment, Rhoads's invention includes an optical sensor, a

computer and a network connection to the Internet, see Fig. 1, see also col. 2, line 64

through col. 3, line 29. Rhoads teaches that the optical sensor (a digital camera or hand

held device) operates to grab frames of image data (i.e. digitally watermarked data)

where the frames of image of data are analyzed by a computer for the presence of

"Bedoop data" (any form of digital data encoding recognized by the system-data which

initiates some action). Once detected, the system responds, in accordance with the

detected Bedoop data (e.g. by initiating some local action, or by communicating with a remote computer, such as over the Internet.

Rhoads further teaches further teaches transmitting the extracted information through one of a wired or wireless communication link towards a data processor located external to the hand-held device (**additionally recited in claims 19, 10 and 13**), see col. 32, lines 40-63.

As per claim 11-12 and 20-21, Rhoads teaches that once Bedoop data is detected , the system responds , in accordance with the detected Bedoop data by initiating some local action, or by communicating with a remote computer, such as over the Internet (i.e. a data communications network), see col. 3, lines 7-12, see also Fig. 1.

As per claims 15 and 22, Rhoads teaches that the extracted information is comprised of a data communication network address through which the data processor can be reached (i.e. Class ID, DNS, and UID), see col. 7, lines 7-49.

As per claims 16 and 23, Rhoads discloses another Bedoop application wherein the action is comprised of using the extracted information to access a database, see col. 3, line 58 through col. 4, line 26.

As per claim 17, Rhoads discloses various image input device such as digital cameras as built-in components of certain computer or camera-on-a-chip systems equipped with Bedoop detector hardware integrated on the same chip substrate to find and decode Bedoop data from the image data, see col. 32, lines 1-26. This clearly

suggests that generating and processing occurs within the image input device as recited in the claim.

As per claim 24, Rhoads teaches that the extracted information from the Bedoop data serves to identify the object in Bedoop-encoded packaging, see col. 3, lines 26-45.

As per claims 25 and 26, Rhoads teaches that the extracted information may be used to verify an identity of a person associated with the object (such as photograph on a badge) and to obtain information (such as name) that is associated with a person who is associated with the object such as name of a person depicted by a photograph, see col. 11, line 49 through col. 12, line 29.

As per claim 27, In another example, Rhoads teaches that UID field of watermark (Bedoop data) serves an authentication purpose, e.g., to verify that the printed medium actually was printed at a particular place, or by a particular user or at a particular time, see col. 13, lines 61-64.

As per claims 28-29, Rhoads teaches in various exemplary embodiment s in which in response to Bedoop data, a data processor transmits information to the requester (i.e. hand held device) and that the information received is displayed to the requester, for example see, col. 22, lines 24-65.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 18 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over

of Rhoads' as applied to claims 9 and 19 above, and further in view of Rhoads, Us Pat.

Appl. No. 2004/0022444, Published Feb. 2004 and Kaish et al, US Pat. No. 5, 974,150,

issued Oct. 1999.

Rhoads ('444) is directed a method and apparatus for identifying an object by

encoding physical attributes of an object where the encoded information is utilized as at

least one element for composing a digital watermark for the object. In another

embodiment the physical attributes of the object are utilized as a key for accessing

information included in a digital watermark for the object, see abstract.

Rhoads' method of identifying an object, comprising the steps of: encoding an

object by utilizing discernable physical attributes for encoding information regarding the

object; and utilizing the encoded information as at least one element for composing a

digital watermark for said object, wherein the physical attributes further comprise a set

of taggants in association with said object and that the taggants is comprised of members

having discernable physical attributes predetermined for encoding information regarding

said object.

Rhoads further detecting said encoded information in the digital watermark; and

authenticating said object by comparing said encoded information with said discernable

physical attributes of said object, see page 72, claims 1-6.

It would have been obvious to one of ordinary skill in the art to modify Rhoads

Bedoop data system (watermarking system) to include physical attributes of the object

encoded in the Bedoop data to provide two levels of security that discourages removal

from authentic objects and reassociation with counterfeit objects, see Kaish, col. 9, lines

1-44.

Prior art made of record and not relied upon:

Maur Barni, Franco Bartolini, Vito Cappellini, Alessandro Piva, Copyright protection of

digital images by embedded unperceivable marks, Dipartmento di Ingegneria Elettronica

, Universita di Firenze, Firenze, Italy, Elsevier Preprint, February 1998, provides a

general reference on Digitalwatermark and copyright protection of multimedia in a

network environment.

Conclusion

Any inquiry concerning this communication or earlier communications from

examiner should be directed to Taghi Arani, whose telephone number is (703) 305-4274.

The examiner can normally be reached Monday through Friday from 8:00 AM to 5:30

PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Ayaz Sheikh, can be reached at (703) 305-9648. The Fax numbers for the

organization where this application is assigned is:

(703) 872-9306

Taghi Arani

Patent Examiner

2/25/2004

AYAZ SHEIKH
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100